SPACE ODYSSEY TEACHER TOOLKIT

Grades K–8

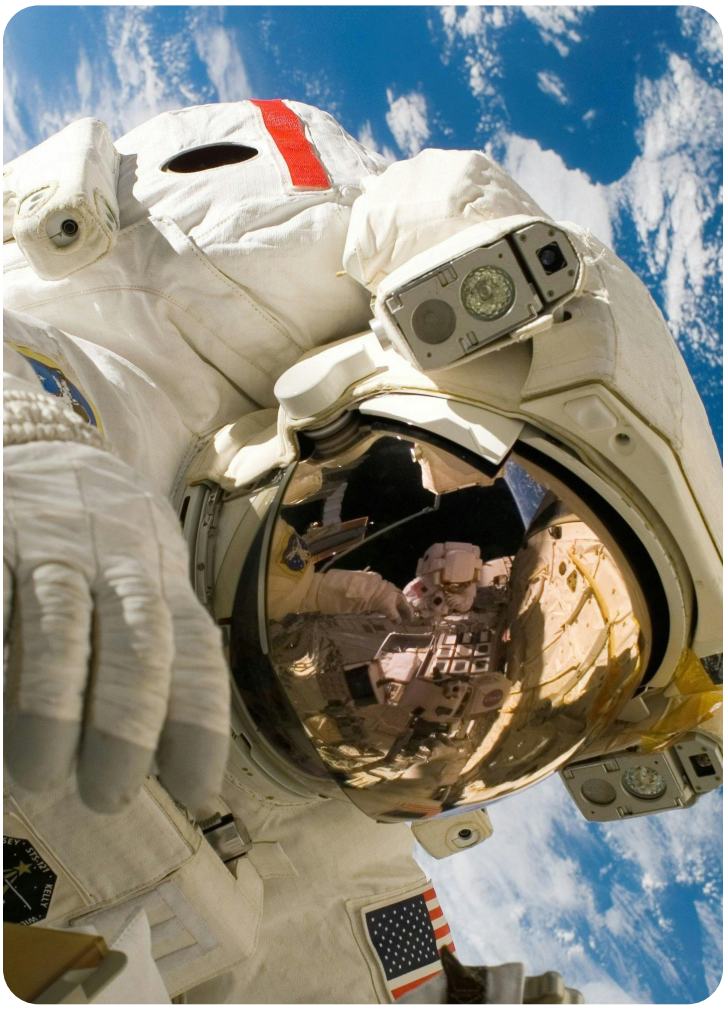
Dear teachers,

Thank you for welcoming Pacific Science Center's Science on Wheels Space Odyssey program into your school! Please enjoy these additional resources in your class or to send home with families to help students continue to build on the themes addressed during their Science on Wheels day.

AFTER YOUR SCIENCE ON WHEELS VISIT

DISCUSSION PROMPTS

Lead a 5—10 minute group discussion after your Science on Wheels visit



- What was your favorite part of your Science on Wheels day?
- Would you want to visit outer space? Why or why not? If you were to take a trip to space, where would you go and what would you pack in your suitcase?
- What are some similarities and differences between Earth and outer space?
- What are some patterns you see in the sky over time? Think about different time periods like daily, monthly, and yearly patterns.
- What questions do you still have about space?

Image Credit: James Blair - NASA - JSC

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ADD ON A DIGITAL DISCOVERY WORKSHOP*

We recommend adding the paired Digital Discovery Workshop Starry Exploration to deepen the impact of your students' Science on Wheels experience. Focusing on fostering science identity and inquiry skills, this specially designed virtual program helps learners reflect on key themes from the Science on Wheels day.

- Digital Discovery Workshops are included for low-income groups, and $250 for general groups. Receive a 10% discount when you book three or more Digital Discovery Workshops.
- 40-minute live, virtual programs for up to 50 students; book as many as needed to reach every participating student.
- Use the **Starry Exploration Scheduling Link** to select a date and time* for your classroom's digital workshop.

Starry Exploration Digital Discovery Workshop: Get ready to blast off into the amazing world of astronomy! Discover how making observations and asking questions has expanded our understanding of the cosmos. Practice these essential skills while exploring real-world careers and building science identity in connection with the themes covered in your Science on Wheels visit.

**Note: while the scheduling page recommends booking the digital workshop prior to your Science on Wheels day, we are more than happy to accommodate groups attending after their Science on Wheel experience.*

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ACTIVITY GUIDES AND VIDEOS

These optional extension resources help students enhance their observation skills and connect to their Science on Wheels experience. These can be used within the learning space or shared with students to do at home with their families.

ACTIVITY GUIDES

- **Crater Creators** | **Creadores de Cráteres**: Conduct an investigation to learn about the impact asteroids and meteorites have on our moon and other planetary bodies. This five-minute follow-along video is also available for step-by-step instructions (for grades 3–8). Activity time: 20–40 minutes.
- **Marshmallow Constellations** | **Constelaciones de Malvavisco**: Learn about some constellations and make 3D models of your favorites. Activity time: 20–40 minutes.
- **Going Through a Phase** | **Pasando por una Fase**: Create a model of the phases of the Moon, Earth, and Sun. Activity time: 20 minutes.
- **Using Stellarium to Explore the Sky**: Make space observations from the comfort of your computer! Watch our five-minute video to learn how to navigate Stellarium, a free planetarium software that allows users to explore the sky beyond the naked eye. Then use our Stellarium **scavenger hunt** to test your skills. Activity time: 30+ minutes.

CAREER VIDEOS

- **Astronomy: Exploring Galaxies with Sam Garza**: Meet Sam Garza, a PhD student at the University of Washington, studying astronomy. Sam uses tools like the Hubble Space Telescope and space data to investigate how a key part of galaxies plays a major role in shaping stars and possibly even supermassive black holes. Video length: 7 minutes.
- **Planetary Science: Traveling To Mars With Tanya Harrison**: Meet Dr. Tanya Harrison, Co-Founder and CEO of the Earth and Planetary Institute of Canada. Dr. Harrison has worked on multiple NASA missions to Mars, including the Opportunity, Curiosity, and Perseverance rovers. Hear Dr. Harrison explain her career journey into planetary science and answer student questions about how we send robots to Mars, what happens when robots break, and what it would be like to live on another planet. Video length: 6 minutes.

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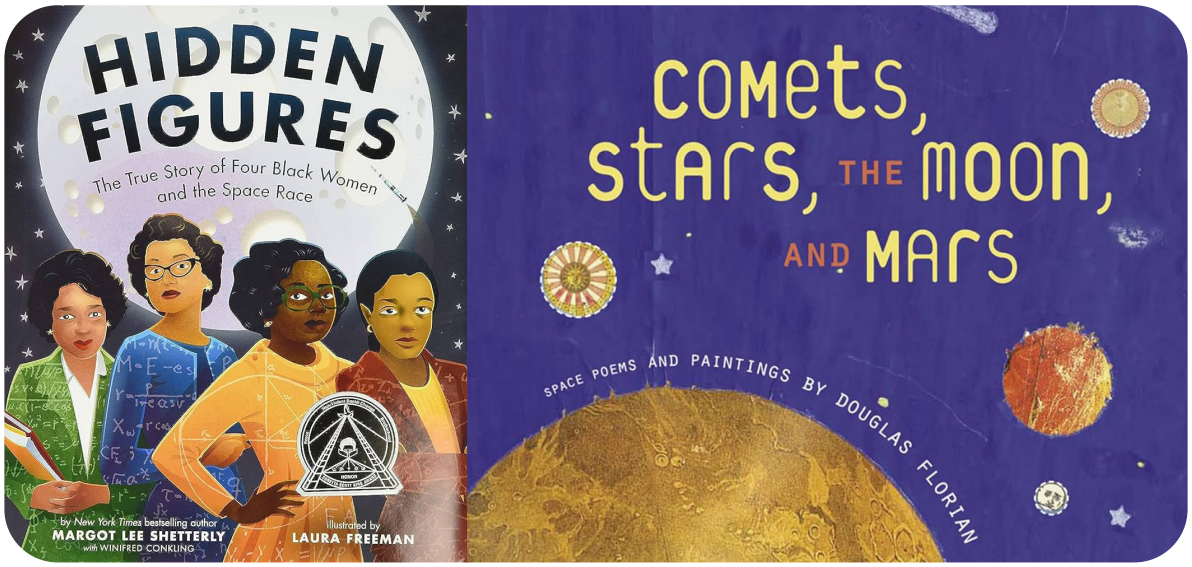
CAREER VIDEOS CONTINUED

- **Astrobiology: Searching for Life in Space with Megan Gialluca**: Meet Megan Gialluca, a PhD student at the University of Washington, studying astronomy and astrobiology. Megan uses tools like spectroscopy and data from telescopes like the JWST to search for signs of life in the atmosphere of exoplanets found in the TRAPPIST-1 system. Video length: 9 minutes.

READING LIST

- Check out the **Science on Wheels: Space Odyssey reading list** for STEAM books related to the program themes.



For more activities with simple materials, check out the Curiosity at Home | Curiosidad en Casa web page. Explore activity sheets by age group and topic in both English and Spanish.

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